WATERSTONE ENVIRONMENTAL, INC.

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Dr. Gabriel Farkas – Project Manager
Southern California Cleanup Operations Branch-Glendale Office
Department of Toxic Substances Control
California EPA
9211 Oakdale Avenue
Chatsworth, CA 91311-6505

RE: REVISED GROUNDWATER MONITORING WORKPLAN FOR THE FORMER PATCO PROPERTY KNOWN AS APN 6336 018 020 00 0 LOCATED IN THE CITY OF COMMERCE, CALIFORNIA

Dear Dr. Farkas:

As you are aware, on June 8, 2008 Pacific Tube Company ("Patco") and Waterstone Environmental, Inc. ("Waterstone") personnel met with the DTSC to discuss the status of the Patco project. The purpose of this letter is to formalize the reduced scope of work discussed during this meeting and is described below.

The Subject Property is known as the former Patco property known as APN 6336 018 020 00 0 located in the City of Commerce, California ("Subject Property").

REVISED GROUNDWATER ASSESSMENT WORKPLAN

Patco proposes to perform a revised groundwater monitoring program consisting of the following elements:

- Two annual sampling and reporting events to be conducted prior to September 30, 2008, and September 30, 2009;
- Gauging of all the accessible Patco groundwater Monitoring Wells (MW-1A, MW-3, MW-4, MW-5, MW-6, and MW-7) and Citadel groundwater Monitoring Wells (UGW-3 through UGW-10); and
- Sampling of Wells MW-1A, MW-5, UGW-4, MW-6, and MW-7.
- Analyses of Volatile Organic Compounds using EPA Method 8260B.

The following six (6) tasks will be performed as part of this workplan:

Tasks	Description
Task 1.0	Gauge All Wells in the Study Area
Task 2.0	Groundwater Monitoring Well Sampling Activities
Task 3.0	Groundwater Laboratory Analyses
Task 4.0	Data Review and Report Preparation

Each of the tasks is summarized in the sections below.

Task 1.0 Gauge All Wells in the Study Area

In accordance with current site access agreements Waterstone will notify the three current property owners and applicable tenets before each groundwater monitoring well gauging and sampling event.

This task includes the following:

- Measure depth to groundwater in all wells (sound wells);
- Record, tabularize, and QA/QC all groundwater depth and elevational data; and
- Prepare maps showing groundwater flow contours for groundwater in the study area.

Waterstone expects that the well gauging to take approximately one-third to one-half day to complete.

Task 2.0 Groundwater Monitoring Well Sampling Activities

In order to evaluate the groundwater quality, Waterstone will perform the following groundwater monitoring well sampling activities:

- Purge wells, as required, prior to sampling groundwater using low-flow methods (see Attachment A);
- Make *in-situ* measurements of pH, DO, and ORP in groundwater using multi-port meter;
- Collect groundwater samples at MW-1A, UGW-4, MW-5, MW-6, MW-7 (plus one duplicate) using low-flow methods; and
- Prepare and include a trip blank in the sample shipping container to the laboratory as a control to determine whether cross-contamination has occurred during transit.

Waterstone expects that the field sampling will take approximately one and one-half (1.5) days to complete.

Task 3.0 Groundwater Laboratory Analyses

Groundwater samples will be collected in the laboratory supplied glassware and at volumes defined by the respective analytical method. All groundwater samples will be properly preserved, stored at or below 4º C prior to analysis, and shipped to the laboratory under chain-of-custody. All groundwater samples will be analyzed within the time prescribed by the analysis method.

This task includes the following:

- Prepare and submit groundwater samples for laboratory analysis:
  - VOCs by EPA Method 8260B
- Oversee and monitor laboratory activities.

All collected groundwater samples will be managed on a chain-of-custody from initial collection to delivery to the laboratory.

Task 4.0 Data Review and Document Preparation

Once the final laboratory data has been received, the following can be performed in preparation of an annual groundwater monitoring report:

- Review and tabulate laboratory data;
- Review and tabulate field data (from *in-situ* measurements);
- Complete groundwater contouring interpretations (obtain groundwater depth information from city and translate to common elevational datum); and
- Complete groundwater monitoring letter report summarizing the groundwater analytical and elevation data.

The annual groundwater monitoring reports will be complete and submitted by October 31, 2008, and October 31, 2009. In addition, electronic data will be uploaded to the State Water Resources Control Board's GeoTracker database in accordance with AB 592 and SB 1189.

CLOSING REMARKS

We appreciate the opportunity to have met with you recently and look forward to continued collaboration with you on this project. If you have any questions concerning this letter, please contact me at (714) 414-1122.

Sincerely,

Jeffrey V. Dagdigian, PhD
Managing Partner

Everett Ferguson Jr., PG 7159, CHG 780
Supervising Hydrogeologist

Attachment

cc: Dick Stewart, PATCO

ATTACHMENT A
WATERSTONE ENVIRONMENTAL, INC.,
STANDARD PROTOCOL
LOW FLOW GROUNDWATER SAMPLING

Low flow purging/groundwater sampling is a sampling procedure which minimizes the amount of impact the purging process has on groundwater chemistry during sample collection and minimizes the volume of water that is being purged and disposed. Waterstone's low flow protocol is consistent with United States Environmental Protection Agency (EPA) Region 9 "*Standard Operating Procedure for Low- Stress (Low Flow)/Minimal Drawdown Ground-Water Sample Collection.*"

Depth to water and total depth of the well is measured prior to well purging and sampling with an electronic water level meter to the nearest 0.01 foot. Prior to the removal of groundwater, the volume of water in one casing volume is calculated.

The QED MicroPurge system is used to purge and monitor the groundwater from the well using low flow procedures. A portable MicroPurge bladder pump is lowered into the well and set a depth where the contaminant zone occurs within the screened interval of the well or a depth at least 2 feet from the bottom of the well to minimize disturbance of sediment that may have accumulated at the bottom of the well. Disposable Teflon lined polyethylene tubing is connected to the pump and extended to the surface for sampling purposes. New tubing is used for sampling each well.

Groundwater purge rate is controlled so drawdown in the well does not exceed 0.33 foot per EPA guidelines. Groundwater is initially pumped at a rate of 0.2 – 0.5 liters per minute. Drawdown in the well is continuously and automatically monitored through the use of the water level meter that is connected to the MicroPurge Digital Controller. If the maximum drawdown (0.33 foot) is exceeded the pump will be automatically shut off to allow the well to recover to within the acceptable drawdown range before the pump is automatically turned back on. The flow rate is increased or decreased based on the rate and amount of drawdown that is measured in the well.

During purging, pH, specific conductivity (specific electrical conductance [SEC]), temperature, dissolved oxygen (DO), oxidation-reduction potential (ORP) and salinity are continuously monitored using an inline MicroPurge Flow Cell or downhole meter. Purging is continued until water pH, SEC, ORP, turbidity, and DO have stabilized per the EPA guidelines listed below.

Parameter	**Stabilization Criteria**	**Reference**
pH	± 0.1 pH units	Puls and Barcelona, 1996; Wilde et al., 1998
Specific electrical conductance (SEC)	± 3% seconds per centimeter (S /cm)	Puls and Barcelona, 1996
oxidation-reduction potential (ORP)	± 10 millivolts (mv)	Puls and Barcelona, 1996
turbidity	± 10 % NTUs (when turbidity is greater than 10 NTUs)	Puls and Barcelona, 1996 Wilde et al., 1998
dissolved oxygen	± 0.3 milligrams per liter	Wilde et al., 1998

LOW FLOW GROUNDWATER SAMPLING

If floating phase hydrocarbons (free product) or other floating phase chemicals exist in the well, the well is not sampled for groundwater. As much floating phase chemical is removed as possible by hand-bailing and temporarily stored in a separate drum pending proper disposal with other drums generated by field work.

Groundwater samples are collected directly from the disposable tubing attached to the submersible MicroPurge bladder pump in 40-mililiter (ml) volatile organic analysis (VOA) vials for the analysis of volatile organic compounds (VOC). Groundwater samples collected in VOA vials are filled in such a manner as to minimize agitation of the sample. The 40-ml vial is filled completely so that a meniscus is formed above the vial lip. The Teflon-lined threaded septum cap is then carefully placed on the vial and screwed on tightly. It is critical that no air bubbles be contained within any sample to be analyzed for VOCs. To check for air bubbles, the sealed vial is inverted. If any bubbles are observed in the vial, the vial is refilled with fresh sample. The number of VOA vials collected for VOC analysis is based on what the laboratory requires

A trip blank are also obtained for analysis and are submitted (with preservative) for VOC analysis. The trip blank is a vial of distilled water included in the thermally-insulated ice chest during sampling and shipping. These blanks are used to provide an indication of contamination introduced as a consequence of the sampling and shipping procedure.

Other appropriate glassware is used for other analyses as designated by the laboratory. The sample containers are filled continuously from the tubing for each analysis required. All groundwater samples are labeled, sealed, stored in airtight plastic bags, placed in a thermally insulated chest with ice, and delivered under chain-of-custody to a State-certified hazardous waste testing laboratory.

The submersible bladder pump and water interface probe is decontaminated between each well using a multi-stage decontamination procedure. The equipment is decontaminated using a non-phosphate containing detergent (Liquinox) and tap water and rinsed with distilled water. The pump contains a removable disposable Teflon bladder that is replaced or decontaminated between wells. The disposable Teflon tubing is replaced between each well sampling.